CLAIMS:

1. A two-dimensional weak radiation detector, comprising:

a photoelectric conversion part which emits electrons by incidence of photons;

an amplification module which is placed to face the photoelectric conversion part, and is provided with a number of electron amplification parts that amplify the electrons emitted by the photoelectric conversion part;

a detection module which is provided to correspond to each of said electron amplification parts constituting the amplification module, and is provided with a number of electron detection parts on which the electrons from the electron amplification parts are incident;

an operation control part which operates each of said electron detection parts constituting the detection module based on an orthogonal modulation pattern; and

a light incidence position calculation part which obtains positions of said photons incident on said photoelectric conversion part, based on a control signal of the operation control part and an output signal of each of said electron detection parts.

2. A two-dimensional weak radiation detector, comprising:

a photoelectric conversion part which emits electrons by incidence of photons;

an amplification module which is placed to face the photoelectric conversion part, and is provided with a number of electron amplification parts that amplify the electrons emitted by the photoelectric conversion part;

a detection module which is provided to correspond to each of said

electron amplification parts constituting the amplification module, and is provided with a number of electron detection parts on which the electrons from the electron amplification parts are incident;

an operation control part which operates each of said electron detection parts constituting the detection module based on an orthogonal modulation pattern;

a light incidence position calculation part which obtains positions of said photons incident on said photoelectric conversion part, based on a control signal of the operation control part and an output signal of each of said electron detection parts; and

a wavelength calculation part which obtains energy of said photons based on magnitude of the output signal of each of said electron detection parts, and converts it into a color signal.

3. The two-dimensional weak radiation detector according to claim 2,

wherein said wavelength calculation part obtains the magnitude of the output signal based on output pulse repetition frequency of the output signal of said electron detection part and converts it into said color signal.

4. The two-dimensional weak radiation detector according to claim 1,

wherein an emission part, which emits photons by incidence of microwaves or corpuscular rays, is provided at a front of said photoelectric conversion part.